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09/934,732	08/22/2001	Charles Kannankeril	D-30200-01	9025

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EXAMINER

GOFF II, JOHN L

ART UNIT

PAPER NUMBER

1733

DATE MAILED: 07/17/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/934,732

Applicant(s)

KANNANKERIL ET AL.

Examiner

John L. Goff

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-- **Th MAILING DATE of this communication appears on the cov r sheet with the correspondence address --**

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 April 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18,21 and 22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-18,21 and 22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☒ The proposed drawing correction filed on 29 April 2003 is: a) ☒ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. This action is in response to Amendment A filed on 4/29/03. All previous objections to the drawings have been overcome. The amendment to the specification was not entered because a clean or marked-up copy was not provided in paper no. 7. All previous 35 USC 112 second paragraph rejections have been overcome.
2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Election/Restrictions

3. Applicant's election without traverse of species I, claims 1-18, in Paper No. 7 is acknowledged.

Drawings

4. The proposed drawing correction and/or the proposed substitute sheets of drawings, filed on 4/29/03 have been approved. A proper drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The correction to the drawings will not be held in abeyance.

Specification

5. The disclosure is objected to because of the following informalities: On page 9, line 7 change “.” to - - . - -. On page 11, line 14 change “or” to - - of - -. On page 16, line 13 delete “56” and insert therein - - 58 - -. On page 22, line 6 change “chambers, connecting channels,” to - - chambers (42), connecting channels (43), --.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

6. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

7. Claims 1-5, 7-13, and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Larson (U.S. Patent 4,096,306) in view of Kawakami (U.S. Patent 4,657,625).

Larson is directed to forming an inflatable cushioning article. Larson teaches a method for forming the inflatable article comprising supplying a first and second film, contacting the first film with the second film, heating discrete areas, i.e. selected portions, of at least one of the first and second films to a temperature above the fusion temperature such that the first and second films are sealed, i.e. through heat and pressure, to one another at the discrete areas to

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form an inflatable article having inflatable chambers, and winding up the inflatable article with the inflatable chambers uninflated (Figures 1 and 2 and Column 3, lines 39-54 and Column 4, lines 26-47). Larson is silent as to extruding the first and second films as opposed to using preformed first and second films. However, it is noted Larson teaches the first and second films can be formed by extrusion. Furthermore, it would have been well within the purview of one of ordinary skill in the art at the time the invention was made to modify Larson to extrude the first and second films in-line with the heat sealing to form an inflatable article through a continuous process as this was a well known technique in the art for forming inflatable articles continuously as shown for example by Kawakami.

Kawakami is directed to producing an inflated article such as bubble pack. Kawakami teaches simultaneously extruding first and second flat films, cooling the films to below their fusion temperature using cooling rolls, heating the films to above their fusion temperature using heating rolls, and contacting the films under pressure using a pair of nip rolls (one of the rolls is patterned) to form the inflated article (Figure 1 and Column 3, lines 43-63).

Regarding claim 3, Larson is silent as to when the two films are contacted. However, Larson teaches applying the heat and pressure for sealing using a pair of heated nip rolls (Column 4, lines 26-47) such that it would have been obvious to one of ordinary skill in the art at the time the invention was made to contact the first and second films while passing them through the heated nip rolls as only the expected results would be achieved.

Regarding claims 8-11, Larson teaches applying the heat and pressure for sealing using a pair of heated nip rolls, and while not expressly recited it would have been obvious to one of ordinary skill in the art at the time the invention was made that the rolls would have a patterned

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raised surface to give the inflatable article air chambers on both sides as shown in the Figures of Larson.

Regarding claim 15, it would have been obvious to one of ordinary skill in the art at the time the invention was made to determine the properties of the nip rolls such as their surface hardness as a function of its effect on the finished inflatable products, i.e. the products are not damaged by the rolls, as doing so would require nothing more than ordinary skill and routine experimentation.

8. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Larson and Kawakami as applied above in paragraph 7, and further in view of Chavannes (GB 978,654).

Larson and Kawakami as applied above teach all of the limitations in claim 6 except for a teaching on using separate extruders to extrude the first and second films. Absent any unexpected results, it would have been well within the purview of one of ordinary skill in the art at the time the invention was made to extrude the first and second films taught by Larson as modified by Kawakami using separate film extruders as suggested by Chavannes.

Chavannes is directed to producing an inflatable article using two extruded films wherein the films are extruded using separate extruders (Figure 3 and Page 3, lines 112-130 and Page 4, lines 1-17).

9. Claims 8-11 are further rejected under 35 U.S.C. 103(a) as being unpatentable over Larson and Kawakami as applied above in paragraph 7, and further in view of Rich (U.S. Patent 3,703,430).

As noted above, Larson teaches applying the heat and pressure for sealing using a pair of heated nip rolls such that it would have been obvious that the nip rolls would have patterned

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raised surfaces to give the inflatable article air chambers on both sides as shown in the Figures of Larson. However, it also would have been obvious to one of ordinary skill in the art at the time the invention was made to use as the heated nip rolls taught by Larson as modified by Kawakami two patterned rolls as shown for example by Rich to form an inflatable article with air chambers on both sides of the article.

Rich is directed to producing an inflatable article. Rich teaches simultaneously feeding preformed first and second flat films to a first pair of heated, patterned nip rolls to form an inflated article with a plurality of longitudinal seals. Rich further teaches feeding the inflated article to a second pair of heated, patterned nip rolls to form transverse seals in the inflated article (Figures 1-4 and Column 2, lines 24-27, 39-41, 55-61).

10. Claims 14, 16-18, 21, and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Larson and Kawakami as applied above in paragraph 7, and further in view of Caputo (U.S. Patent 4,576,669).

Larson and Kawakami as applied above teach all of the limitations in claims 14, 16-18, 21, and 22 except for a teaching on coating the nip rolls with a release coating, cooling the uninflated article using a cooling roll, and the particulars of the continuous operation, e.g. process speed, surface pattern of the rolls, hardness of the rolls, etc.

Regarding claims 14, 21, and 22, it would have been obvious to one of ordinary skill in the art at the time the invention was made to coat the nip rolls taught by Larson as modified by Kawakami with a release coating as suggested by Caputo to prevent the softened films from sticking to the rolls.

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Regarding claims 16-18, 21, and 22 it is noted Larson teaches a roll for reeling up the uninflated article. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use as the reeling roll taught by Larson as modified by Kawakami a cooled reeling roll as suggested by Caputo to accelerate the cooling of the uninflated article thereby increasing the amount of inflatable articles produced.

Regarding claims 21 and 22, as to the process speed, it would have been obvious to one of ordinary skill in the art at the time the invention was made to optimize the process speed as a function of the amount of quality inflatable products produced as doing so would require nothing more than ordinary skill and routine experimentation. As to the raised pattern on the nip rolls, it would have been well within the purview of ordinary skill in the art at the time the invention was made to select the raised pattern depending upon the type of product produced as only the expected results would be achieved. As to the roughness and hardness of the cooling roll, it would have been obvious to one of ordinary skill in the art at the time the invention was made to determine the properties of the cooling roll such as its surface roughness and hardness as a function of its effect on the finished inflatable products, i.e. the products are not damaged by the cooling roll, as doing so would require nothing more than ordinary skill and routine experimentation.

Caputo is directed to an inflated article. Caputo teaches feeding preformed first and second flat films to a pair of nip rolls (one heated roll and one patterned roll), fusion bonding the films under heat and pressure to form an inflated article, and cooling the inflated article using a cooling roll (Figure 1 and Column 4, lines 17-21 and 43-48). Caputo teaches coating the nip

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rolls with a release coating (such as Teflon) to prevent the softened films from sticking to the rolls (Column 6, lines 32-35 and 41-45 and Column 10, lines 38-56).

11. Claims 1-5, 7-13, and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kawakami in view of Larson.

Kawakami is directed to producing an inflated article such as bubble pack. Kawakami teaches simultaneously extruding first and second flat films, cooling the films to below their fusion temperature using cooling rolls, heating the films to above their fusion temperature using heating rolls, and contacting the films under pressure using a pair of nip rolls (one of the rolls is patterned) to form the inflated article (Figure 1 and Column 3, lines 43-63). Kawakami is silent as to forming uninflated articles. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use as the nip rolls taught by Kawakami a pair of heated nip rolls with a pattern for forming uninflated articles as suggested by Larson to form an inflatable article that can shipped uninflated thereby reducing the shipping cost.

Larson is directed to forming an inflatable cushioning article that can be shipped uninflated to the site of its intended use and then inflated at the site of its intended use to form cushioning material. Larson teaches a method for forming the inflatable article comprising supplying a first and second film, contacting the first film with the second film, heating discrete areas, i.e. selected portions, of at least one of the first and second films to a temperature above the fusion temperature such that the first and second films are sealed, i.e. through pressure, to one another at the discrete areas to form an inflatable article having inflatable chambers, and winding up the inflatable article with the inflatable chambers uninflated (Figures 1 and 2 and Column 3, lines 39-54 and Column 4, lines 26-47).

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Regarding claims 2, 8-11 and 13, Larson teaches applying the heat and pressure for sealing using a pair of heated nip rolls, and while not expressly recited it would have been obvious to one of ordinary skill in the art at the time the invention was made that the rolls would have a patterned raised surface to give both of the films the pattern of inflatable chambers as shown in the Figures of Larson.

Regarding claim 15, it would have been obvious to one of ordinary skill in the art at the time the invention was made to determine the properties of the nip rolls such as their surface hardness as a function of its effect on the finished inflatable products as doing so would require nothing more than ordinary skill and routine experimentation.

12. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kawakami and Larson as applied above in paragraph 11, and further in view of Chavannes (GB 978,654).

Kawakami and Larson as applied above teach all of the limitations in claim 6 except for a teaching on using separate extruders to extrude the first and second films. Absent any unexpected results, it would have been well within the purview of one of ordinary skill in the art at the time the invention was made to extrude the first and second films taught by Kawakami as modified by Larson using separate film extruders as suggested by Chavannes.

Chavannes is directed to producing an inflatable article using two extruded films wherein the films are extruded using separate extruders (Figure 3 and Page 3, lines 112-130 and Page 4, lines 1-17).

13. Claims 14, 16-18, 21, and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kawakami and Larson as applied above in paragraph 11, and further in view of Caputo (U.S. Patent 4,576,669).

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Kawakami and Larson as applied above teach all of the limitations in claims 14, 16-18, 21, and 22 except for a teaching on coating the nip rolls with a release coating, cooling the uninflated article using a cooling roll, and the particulars of the continuous operation, e.g. process speed, surface pattern of the rolls, hardness of the rolls, etc.

Regarding claims 14, 21, and 22, it would have been obvious to one of ordinary skill in the art at the time the invention was made to coat the nip rolls taught by Kawakami as modified by Larson with a release coating as suggested by Caputo to prevent the softened films from sticking to the rolls.

Regarding claims 16-18, 21, and 22 it is noted Kawakami teaches a peeling roll for reeling up the uninflated article. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use as the peeling roll taught by Kawakami as modified by Larson a cooled peeling roll as suggested by Caputo to accelerate the cooling of the uninflated article thereby increasing the amount of inflatable articles produced.

Regarding claims 21 and 22, as to the process speed, it would have been obvious to one of ordinary skill in the art at the time the invention was made to optimize the process speed as a function of the amount of quality inflatable products produced as doing so would require nothing more than ordinary skill and routine experimentation. As to the raised pattern on the nip rolls, it would have been well within the purview of ordinary skill in the art at the time the invention was made to select the raised pattern depending upon the type of product produced, as only the expected results would be achieved. As to the roughness and hardness of the cooling roll, it would have been obvious to one of ordinary skill in the art at the time the invention was made to determine the properties of the cooling roll such as its surface roughness and hardness as a

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function of its effect on the finished inflatable products, i.e. the products are not damaged by the cooling roll, as doing so would require nothing more than ordinary skill and routine experimentation.

Caputo is directed to an inflated article. Caputo teaches feeding preformed first and second flat films to a pair of nip rolls (one heated roll and one patterned roll), fusion bonding the films under heat and pressure to form an inflated article, and cooling the inflated article using a cooling roll (Figure 1 and Column 4, lines 17-21 and 43-48). Caputo teaches coating the nip rolls with a release coating (such as Teflon) to prevent the softened films from sticking to the rolls (Column 6, lines 32-35 and 41-45 and Column 10, lines 38-56).

Response to Arguments

14. Applicant's arguments with respect to claims 1-18, 21, and 22 have been considered but are moot in view of the new ground(s) of rejection. Applicant argues Kawakami and Rich do not disclose "heating selected portions of at least one of the first and second films to a temperature above a fusion temperature". It is noted heating selected portions does not exclude heating the entirety of the films. Applicant further argues one of ordinary skill in the art would not have the seen the need for the use of a cooling roller or release coatings in a process in which only selected portions of the films are being heated. It is noted cooling rollers and rollers with release coatings are well known and conventional in the art for increasing the process speed of a continuous process wherein the article produced is at least partially heated as the cooling rollers prevent the heated article from sticking to itself and release coatings prevent the heated article from sticking to the rollers.

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Conclusion

15. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

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16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **John L. Goff** whose telephone number is **703-305-7481**. The examiner can normally be reached on M-Th (8 - 5) and alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Ball can be reached on 703-308-2058. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.



John L. Goff
July 8, 2003



JEFF H. AFTERGUT
PRIMARY EXAMINER
GROUP 1300